REMARKS/ARGUMENTS

I. Summary of the Office Action

Claims 1-76 are pending in the application. Of these claims, 1-38 and 59-76 have been withdrawn from consideration as being drawn to nonelected inventions.

The informal drawings have been objected to by the Examiner.

Claims 42-44 and 46 have been objected to because of claim dependency informalities.

Claim 39 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,511,237 to Jaeger (hereinafter "Jaeger") in view of U.S. Patent No. 406,247 to Webb (hereinafter "Webb") and U.S. Patent No. 2,164,047 to Baumann (hereinafter "Baumann").

Claim 40 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of U.S. Patent No. 5,450,750 to Abler (hereinafter "Abler").

Claims 41 and 42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of U.S. Patent No. 5,727,289 to Reder (hereinafter "Reder") and U.S. Patent No. 2,930,074 to Marks (hereinafter "Marks").

Claim 46 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Webb and Baumann, and further in view of "A New Air Displacement Method for the Determination of Human Body Composition" to Dempster et al. (hereinafter "Dempster").

Claims 49 and 53 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and U.S. Patent No. 4,915,431 to Bailey (hereinafter "Bailey").

Claim 52 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and Bailey, and further in view of Abler.

Claims 54 and 55 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaeger in view of Dempster and Bailey, and further in view of Webb, Baumann, Reder and Marks.

Claims 43-45, 47-48, 50-51 and 56-58 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

II. Summary of Applicants' Reply

Withdrawn claims 1-38 and 59-76 have been cancelled.

Claims 39, 41-44, 46, 49 and 54 have been amended for the reasons advanced hereinbelow. No new matter has been added by these amendments.

The Examiner's rejections are respectfully traversed.

Reconsideration of this application in light of the following remarks is respectfully requested.

III. Reply to the Objections to the Drawings

The Examiner has objected to the drawings for failure to comply with the following drawing requirements: 37 CFR 1.84(h)(1), 37 CFR 1.84(h)(3), 37 CFR 1.84(l), 37 CFR 1.84(m), and 37 CFR 1.84(p). The Examiner further noted that the reference character "60" in Figure 3B, used to identify the sleeve, is reference character "68" in the disclosure.

In response to these objections, applicants submit formal drawings concurrent with the present Response. Applicants respectfully submit that the formal drawings overcome each of the above-mentioned objections. In particular, applicants have amended Figure 3B, at the Examiner's suggestion, in accordance with 37 C.F.R. 1.121 (d).

Applicants therefore respectfully request that the objections to the drawings be withdrawn.

IV. Reply to the Claim Objections

First, the undersigned thanks the Examiner for his telephone call on February 11, 2004. During that interview, the Examiner suggested making various claim amendments to avoid rejections under 35 U.S.C. 112. Specifically, the Examiner suggested the following:

a) amend claim 42 to depend on claim 41;

b) amend claim 43 to depend on claim 42;

c) amend claim 44 to depend on claim 42;

d) amend claim 46 to depend on claim 39;

e) in claim 41, add "leaf" after "first hinge" in the sixth line of the claim; and

f) in claim 54, add "leaf" after "first hinge" in the sixth line of the claim.

Applicants have amended the above-mentioned claims to incorporate the Examiner's suggested changes.

V. Applicants' Response to the Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claim 39 under 35 U.S.C. 103(a) as being unpatentable over Jaeger in view of Webb and Baumann. The Examiner claims that Jaeger teaches a plethysmograph, while Webb teaches a dual-articulating hinge. The Examiner further contends that Baumann teaches a hinge that would "allow the entire door to open clear of the chamber ... thus ensuring that large items that

are placed in the chamber do not hit and damage the door." (Office Action at page 4).

The Examiner's rejection of claim 39 is respectfully traversed.

First, there is no implicit or explicit motivation to combine the Jaeger reference with the Webb or Baumann references to achieve the apparatus of applicants' claimed invention.

Applicants' invention is directed to apparatus for repeatable door closure in a plethysmographic measurement chamber. Applicants have incorporated a dual articulating hinge into a plethysmograph to "accurately and repeatably define the clearance between chamber door 24 and chamber wall 22." (see, e.g., applicants' specification at page 8, lines 20-25).

Solely to clarify applicants' invention, claim 39 has been amended to recite: "**wherein said dual articulating hinge facilitates repeatable door closure in the chamber.**"

In order to set forth a prima facie case of obviousness, the references must: a) suggest to a person having ordinary skill in the art to make the invention using the references combined; and b) once made, that there would be a reasonable expectation of success.

The Examiner has not set forth a prima facie case of obviousness. There is no suggestion, either implicit or explicit,

to use the hinges of Webb or Baumann in the plethysmograph of Jaeger, as the Examiner contends.

First, the Jaeger reference teaches a plethysmograph that focuses primarily on measuring lung volume. The reference does not seem to be concerned in any way with facilitating repeatable door closure, as recited by amended independent claim 39.

In fact, the Examiner concedes that the hinge in Jaeger is unlabeled, (Office Action at page 3), and thus appears to be an unimportant component. One of ordinary skill in the art reading the Jaeger reference would not realize the importance of addressing the problem of repeatable door closure in a plethysmograph measurement chamber. In short, there is no remote suggestion in the Jaeger reference of a dual articulating hinge that facilitates repeatable door closure in the chamber, as required by applicants' amended claim 39.

The Webb reference does not teach or suggest this claim limitation either. The hinge in Webb "is designed particularly for use in connection with the divided lid of a type-writer cabinet." (Webb, column 1, lines 8-10). Further, Webb states "the object of the invention being to produce a hinge that shall not project up above the top or lid to which it is applied." (Webb, column 1, lines 10-12).

Even if Webb is construed as a dual-articulating hinge, Webb does not teach or suggest using the hinge to address the problem of repeatable door closure. Webb explicitly suggests use of the hinge in type-writer cabinets, but does not teach or suggest repeatable door closure. Therefore, one of ordinary skill in the art would not turn to Webb to solve the problem of repeatable door closure, especially for use with a plethysmograph.

Baumann also does not teach or suggest a hinge to facilitate repeatable door closure. Instead, Baumann discloses "a hinge construction wherein the contracting relatively movable parts are protected from moisture, dust, grit etc., and ... to retain lubricants for a comparatively long period of time." (Baumann column 1, lines 5-14). The Examiner makes reference to FIG. 12, which the Baumann patent states facilitates "concealment of the hinge." (see Baumann, col. 1, lines 54-57 and col. 3, lines 24-32). As such, one of ordinary skill in the art would not turn to Baumann to solve the problem of repeatable door closure either.

Accordingly, the Examiner has selected three references, none of which remotely teach or suggest a dual articulating hinge that **facilitates repeatable door closure** in a plethysmographic measurement chamber. Therefore, the Examiner does not meet the first requirement of a prima facie case of obviousness: there is no suggestion in the art to combine references to create applicants' invention of claim 39.

Even assuming, arguendo, that there is some suggestion in the art to combine references, which applicants respectfully traverse, then the Examiner fails to meet the second requirement for a prima facie case of obviousness, namely, a reasonable expectation of success.

If a person of ordinary skill in the art used the hinges of Webb or Baumann in the plethysmograph of Jaeger, the person would not likely succeed in achieving a dual articulating hinge that facilitates repeatable door closure in a chamber.

As noted above, Webb teaches a hinge, particularly made for use in a type-writer cabinet, and "the object of the invention being to produce a hinge that shall not project up above the top or lid to which it is applied." Webb's hinge is not remotely concerned with achieving repeatable door closure. Even if Webb's hinge were combined with Jaeger's plethysmograph, the Examiner has provided neither evidence nor argument that the combination would succeed in producing a dual articulating hinge that "facilitates repeatable door closure in a chamber."

Further, as noted above, the hinge in Baumann is concerned with concealment of the hinge, and further concerned with protecting movable parts from moisture, dust, grit etc. Baumann's hinge is not remotely concerned with achieving repeatable door closure. Even if Baumann's hinge were combined with Jaeger's plethysmograph, the Examiner has provided neither

evidence nor argument that the combination would succeed in producing a dual articulating hinge that "facilitates repeatable door closure in a chamber."

For at least the reasons set forth above, the Examiner has failed to make a prima facie case of obviousness for claim 39. Accordingly, applicants respectfully submit that independent claim 39 is in condition for allowance. Since the rejection to independent claim 39 is in error, applicants respectfully submit that dependent claims 40-48, which depend from claim 39, also are in condition for allowance.

The Examiner has rejected claim 49 under 35 U.S.C. 103(a) as unpatentable over Jaeger in view of Dempster and Bailey. The Examiner contends that Jaeger teaches a plethysmograph, Dempster teaches an electromagnetic latch in a plethysmographic chamber, and Bailey teaches a laterally compliant electromagnetic latch assembly.

The Examiner's rejection of claim 49 is respectfully traversed.

Applicants' amended claim 49 comprises, *inter alia*, "a magnetic latch for fastening said chamber door to said chamber wall when said door is in a closed position." As explained in applicants' specification, roller ball 66, which is part of first latch member 60, is configured to rotate with respect to insert

plate 78, which is part of second latch member 62. Since first and second latch members 60 and 62 only make contact where roller ball 66 makes contact with insert plate 78, various stresses and strains may be reduced. (see, e.g., applicants' specification at page 12, lines 15-32).

Therefore, applicants' magnetic latch of claim 49 is "laterally compliant" because it permits lateral movement of the chamber door with respect to the chamber wall.

Advantageously, since roller ball 66 permits lateral movement of the chamber door with respect to the chamber wall, various stresses may be reduced, including those stresses caused by shifting, deviations in chamber door size, differing application of pressure in a closing of the chamber door, and so forth (see, e.g., page 12, lines 25-32). Since the latch is "laterally compliant," the chamber closure volume is maintained.

Solely to clarify applicants' invention, claim 49 has been amended to recite: "**said magnetic latch permitting lateral movement of the chamber door with respect to the chamber wall in the closed position.**"

For purposes of the present invention, the term "lateral movement" of the chamber door with respect to the chamber wall in the closed position refers generally to movement of insert plate 78 in a direction that is parallel to latch face plate 64 (see applicants' FIG. 3B). Indeed, in FIG. 3B, applicants define a

"plane of closure" between latch face plate 64 of first latch member 60, and the approximately planar surface at the proximal end of second latch member 62. (applicants' specification at page 12, lines 15-19). Further, "the capability of roller ball 66 to rotate with respect to insert plate 78 relieves stress in the plane of closure...." (applicants' specification at page 12, lines 25-32). Accordingly, in the closed position, the magnetic latch permits lateral movement of the chamber door with respect to the chamber wall, as recited by amended claim 49.

Unlike applicants' invention, the electromagnetic lock disclosed in Bailey does not permit lateral movement of the chamber door with respect to the chamber wall in the closed position," as set forth in applicants' amended claim 49.

As the Examiner notes, the lock in Bailey comprises a push button 9a and a plunger 8. The Examiner states: "Simple pushing on the door will open the door and will further release the plunger from the push button, thus deactivating the electromagnet. This type of laterally complaint latch ... would also allow the occupant of the chamber to open the door in case of an emergency." (Office Action, page 8).

Since Bailey's latch facilitates opening of the door, it is not "permitting lateral movement of the chamber door with respect to the chamber wall in the closed position." Rather, Bailey's latch appears to allow a longitudinal movement between

plunger 8 and central pole 10. The patent describes that plunger 8 is drawn away from central pole 10. (Bailey at column 5, lines 29-42).

Such movement between central pole 10 and plunger 8 in the Bailey patent is **orthogonal to** the movement between the chamber door and the chamber wall in the closed state of applicants' invention. In particular, the movement between central pole 10 and plunger 8 in the Bailey patent is orthogonal to the movement between insert plate 78 and latch face plate 64 in the closed state of applicants' invention.

Moreover, the difference in directional movement between applicants' invention and the Bailey patent serves different purposes. As noted above, the lateral movement of the chamber door with respect to the chamber wall, described in applicants' invention, reduces various stresses. By contrast, the longitudinal movement of the plunger with respect to the armature plate, described in the Bailey patent, is integrally related to opening the door, but not concerned with reducing stresses.

Since neither Bailey, Jaeger nor Dempster teaches a magnetic latch that permits lateral movement of the chamber door with respect to the chamber wall in the closed position, applicants respectfully submit that independent claim 49 is in condition for allowance.

With respect to the dependent claims rejected in the Office Action, and not specifically addressed hereinabove, applicants submit that because the rejections to independent claims 39 and 49 are in error, then dependent claims 40-48 and 50-58 are allowable for at least the reasons described hereinabove. Accordingly, applicants submit that the rejections are in error and should be withdrawn.

Conclusion

In view of the foregoing, applicants respectfully submit that this application, including each of claims 39-58, is in condition for allowance.

Reconsideration and allowance of this application is respectfully requested.

Respectfully submitted,

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Annotated Sheet Showing Changes

Numeral 68 replaces numeral 60.

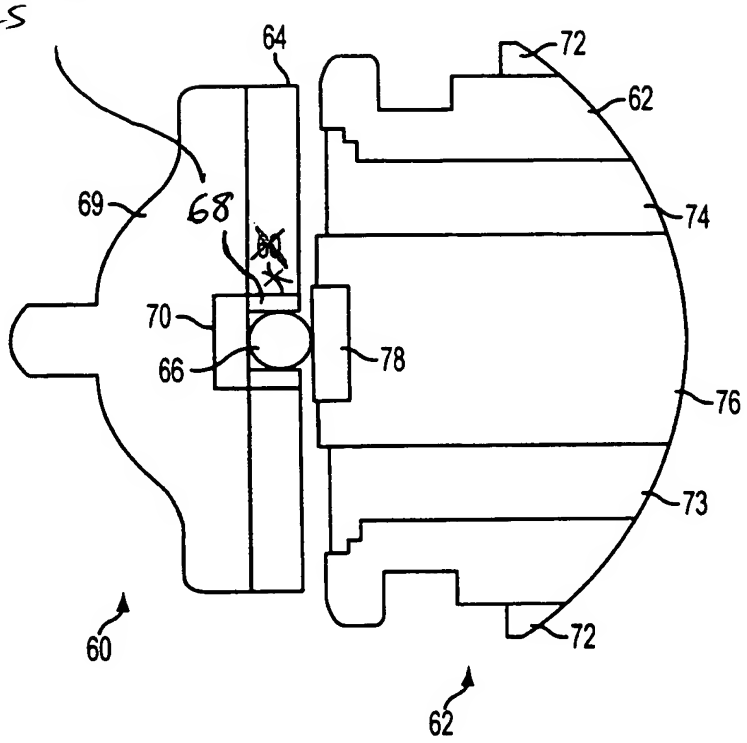

FIG. 3B